

**Size 1210 (EIA) or 3225 (IEC)**
**Rated inductance 0,0082 to 100  $\mu$ H**
**Rated current 65 to 700 mA**


### Construction

- Ceramic or ferrite core
- US-welded winding
- Flame-retardant encapsulation

### Features

- High  $Q$  factor
- High resonance frequency
- Suitable for reflow (IR and vapor phase) and wave soldering

### Applications

- Filtering of supply voltages, coupling, decoupling
- Antenna systems
- Automotive electronics
- Telecommunications

### Terminals

- Silver-plated
- 1–2  $\mu$ m Cu, 4–6  $\mu$ m Ag
- Base material CuSn6
- Suitable for soldering and conductive adhesion
- No leaching during wave soldering

### Marking

Marking on component:

Manufacturer and series mark »–«

$L$  value (in nH) and tolerance of  $L$  value (coded),  
date of manufacture (coded)

Minimum data on reel:

Manufacturer, part number, ordering code,  
 $L$  value and tolerance of  $L$  value,  
quantity, date of packing

### Delivery mode

8-mm blister tape, wound on 180-mm or 330-mm  $\varnothing$  reel

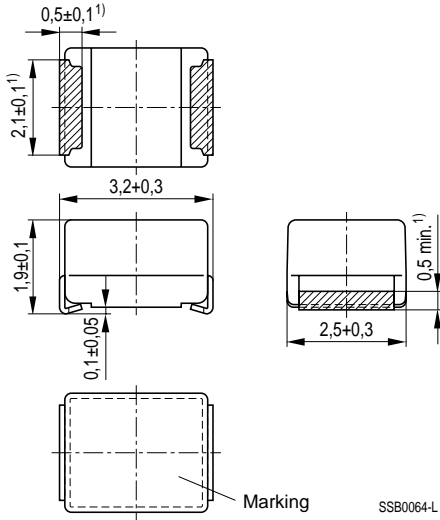
For details on taping, packing and packing units [see page 153](#)



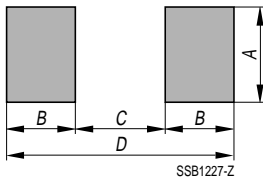
# General technical data

Rated inductance $L_R$	Measured with impedance analyzer HP 4194A at frequency $f_L$
Q factor $Q_{\min}$	Measured with impedance analyzer HP 4194A/HP 4291A at frequency $f_Q$
Rated current $I_R$	Maximum permissible dc with inductance decrease $\Delta L/L_0 \leq 10\%$ and temperature increase of $\leq 20\text{ K}$ at rated temperature of $85^\circ\text{C}$
Self-resonance frequency $f_{\text{res, min}}$	Measured with network analyzer HP 8753
DC resistance $R_{\max}$	Measured at $20^\circ\text{C}$ ambient temperature, measuring current $< I_R$
Climatic category	In accordance with IEC 60068-1 55/125/56 ( $-55^\circ\text{C}/+125^\circ\text{C}/56$ days damp heat test)
Solderability	In accordance with IEC 60062-2-58 ( $215 \pm 3^\circ\text{C}$ , $(3 \pm 0,3)\text{ s}$ ) Wetting of soldering area: $\geq 95\%$
Resistance to soldering heat	In accordance with IEC 60068-2-20 $260^\circ\text{C}$ , $10\text{ s}$ $\Delta L/L \leq \pm 3\%$
Permissible PCB bending	2 mm (100 mm long standard PCB)
Weight	Approx. 50 mg

## Dimensional drawing



## Layout recommendation



Dimensions (mm)	A	B	C	D
Wave soldering	2,3	1,60	2,1	5,3
Reflow soldering	2,7	1,15	2,1	4,4

1) Soldering area, silver plated

**Characteristics and ordering codes**

$L_R$ $\mu\text{H}$	Tolerance <sup>1)</sup>	$f_L$ MHz	$Q_{\min}$	$f_Q$ MHz	$I_R$ mA	$R_{\max}$ $\Omega$	$f_{\text{res, min}}$ MHz	Ordering code <sup>2)</sup> ( $\varnothing$ 180-mm reel)
Core material: ceramics								
0,0082	$\pm 20\%$ $\triangleq M$	10	20	100	700	0,10	4000	B82422-A3829-M
0,010	$\pm 5\%$ $\triangleq J$	10	20	100	700	0,10	4000	B82422-A3100-+
0,012		10	25	100	700	0,10	3500	B82422-A3120-+
0,015	$\pm 10\%$ $\triangleq K$	10	25	100	640	0,12	3000	B82422-A3150-+
0,018		10	30	100	640	0,12	2500	B82422-A3180-+
0,022		10	30	100	570	0,15	2000	B82422-A3220-+
0,027		10	20	50	570	0,15	1950	B82422-A3270-+
0,033		10	20	50	530	0,19	1900	B82422-A3330-+
0,039		10	25	50	530	0,19	1450	B82422-A3390-+
0,047		10	25	50	480	0,21	1350	B82422-A3470-+
0,056		10	25	50	470	0,23	1300	B82422-A3560-+
0,068		10	25	50	440	0,26	1250	B82422-A3680-+
0,082		10	25	50	415	0,29	1150	B82422-A3820-+
0,10		10	25	50	400	0,30	1000	B82422-A3101-+
0,12		1	20	30	390	0,33	880	B82422-A3121-+
0,15		1	20	30	360	0,38	850	B82422-A3151-+
0,18		1	20	30	345	0,42	800	B82422-A3181-+
0,22		1	20	30	280	0,64	700	B82422-A3221-+
0,27		1	20	30	250	0,76	650	B82422-A3271-+
0,33		1	20	30	200	1,20	580	B82422-A3331-+
0,39		1	20	30	180	1,50	540	B82422-A3391-+
0,47		1	20	30	150	2,20	480	B82422-A3471-+
0,56		1	20	30	145	2,40	440	B82422-A3561-+
0,68		1	20	30	140	2,70	400	B82422-A3681-+
0,82		1	20	30	135	3,00	350	B82422-A3821-+

1) Closer tolerances and special versions upon request.

2) Replace the + by the code letter for the required inductance tolerance.

For reel size  $\varnothing$  330 mm append code number »8«. Example: B82422-A3100-K8


**Characteristics and ordering codes (continued)**

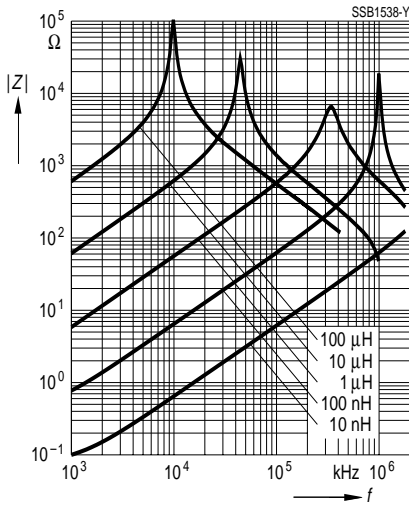
$L_R$ $\mu\text{H}$	Tolerance <sup>1)</sup>	$f_L$ MHz	$Q_{\min}$	$f_Q$ MHz	$I_R$ mA	$R_{\max}$ $\Omega$	$f_{\text{res, min}}$ MHz	Ordering code <sup>2)</sup> ( $\varnothing$ 180-mm reel)
Core material: ferrite								
1,0	$\pm 5\%$	1	20	7,96	380	0,34	320	B82422-A1102-+
1,2	$\triangle J$	1	20	7,96	370	0,37	300	B82422-A1122-+
1,5	$\pm 10\%$	1	20	7,96	340	0,42	270	B82422-A1152-+
1,8	$\triangle K$	1	25	7,96	290	0,60	250	B82422-A1182-+
2,2		1	25	7,96	270	0,75	230	B82422-A1222-+
2,7		1	25	7,96	240	0,88	210	B82422-A1272-+
3,3		1	25	7,96	200	1,20	180	B82422-A1332-+
3,9		1	25	7,96	175	1,65	165	B82422-A1392-+
4,7		1	25	7,96	150	2,20	145	B82422-A1472-+
5,6		1	25	7,96	140	2,60	135	B82422-A1562-+
6,8		1	25	7,96	135	2,80	115	B82422-A1682-+
8,2		1	25	7,96	130	3,00	85	B82422-A1822-+
10		1	25	2,52	180	1,60	21	B82422-A1103-+
12		0,1	25	2,52	175	1,65	18,5	B82422-A1123-+
15		0,1	25	2,52	165	1,85	17,5	B82422-A1153-+
18		0,1	25	2,52	155	2,00	15,5	B82422-A1183-+
22		0,1	25	2,52	145	2,50	14,0	B82422-A1223-+
27		0,1	25	2,52	120	3,70	12,0	B82422-A1273-+
33		0,1	25	2,52	110	4,40	11,5	B82422-A1333-+
39		0,1	25	2,52	90	6,30	9,0	B82422-A1393-+
47		0,1	25	2,52	85	7,00	8,0	B82422-A1473-+
56		0,1	25	2,52	85	6,75	8,0	B82422-A1563-+
68		0,1	25	2,52	80	7,70	7,5	B82422-A1683-+
82		0,1	20	2,52	70	10,0	6,5	B82422-A1823-+
100		0,1	20	2,52	65	11,5	6,0	B82422-A1104-+

1) Closer tolerances and special versions upon request.

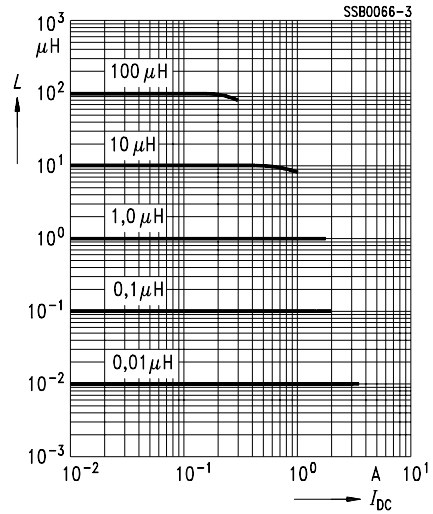
2) Replace the + by the code letter for the required inductance tolerance.

For reel size  $\varnothing$  330 mm append code number »8«. Example: B82422-A1102-K8

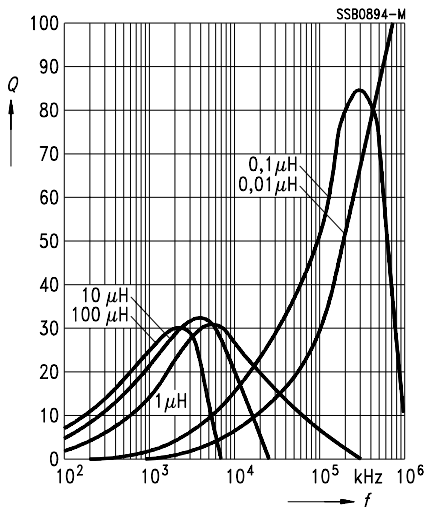
Impedance  $|Z|$   
versus frequency  $f$   
measured with impedance analyzer  
HP 4291A



Inductance  $L$   
versus dc load current  $I_{DC}$   
measured with LCR meter  
HP 4275A



Q factor versus frequency  $f$   
measured with impedance analyzer  
HP 4194A / HP 4291A



Current derating  $I_{op}/I_R$   
versus ambient temperature  $T_A$

